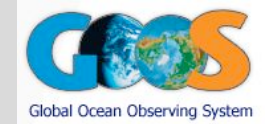




20th Annual Fisherman and Scientists Research Society Conference
20-21 February 2013, Truro, Nova Scotia



OTN HALIFAX LINE

World's Longest Acoustic Receiver Line

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<http://global.oceantrack.org>



About this presentation

- What is Tracking
- Challenges
- Animals and Institutions
- Oceanographic instruments
- Data Management

OTN Halifax Line

Overview | Information | Details | About | Contact | Help

Title: Collection Code: NFO Short Name: OTN Halifax Line Long Name: Ocean Tracking Network Halifax Line

Status: In Progress | Data: 2015-01-01 to 2015-09-01 | Data and Metadata: 2015-09-01

Location: Halifax, NS, Canada

Period: 2015-01-01 to 2015-09-01

Principal Investigator: Dr. [Name]

Scientific Summary: This project is part of the Ocean Tracking Network (OTN) Halifax Line, which is a series of acoustic receivers deployed along the Halifax coast. The receivers are used to track the movements of marine mammals, such as whales and dolphins, in the region. The project is currently in progress and is expected to be completed in early 2016.

Geographic Summary: The Halifax Line is located along the coast of Nova Scotia, Canada. It consists of a series of acoustic receivers deployed along the coastline. The receivers are spaced at intervals of approximately 10-15 km. The line extends from the point of Pictou Harbour in the north to the point of St. John's in the south.

Period Summary: 2015-01-01 to 2015-09-01

Activity Summary	2015	2016	2017	2018	2019	2020	Total
Message - 1000 (Maximum) / Total (Observed)	17,128	22,128	27,128	32,128	37,128	42,128	188,880
Deployment - 1 (Maximum) / Number of Deployments	22	22	22	22	22	22	132
Receiver - 1 (Maximum) / Number of Receivers	12	12	12	12	12	12	72
Deployment - 1 (Maximum) / Number of Deployments	1	1	1	1	1	1	6
Receiver - 1 (Maximum) / Number of Receivers	1	1	1	1	1	1	6

Base OTN Network Summary: Overview of the entire OTN network, including details on the number of receivers, messages, and data collected across all regions.

Address: The Halifax Line is located along the coast of Nova Scotia, Canada. It consists of a series of acoustic receivers deployed along the coastline. The receivers are spaced at intervals of approximately 10-15 km. The line extends from the point of Pictou Harbour in the north to the point of St. John's in the south.

Installation: The Halifax Line was installed in early 2015. The receivers were deployed along the coastline using a combination of small boats and larger vessels. The deployment process was completed by late May 2015.

Equipment: The Halifax Line uses a variety of equipment, including acoustic receivers, transmitters, and data loggers. The receivers are deployed in a variety of depths, from near the surface to 100 meters. The equipment is designed to be durable and to provide long-term data collection.

Data Summary: The Halifax Line has collected a large amount of data since its installation. The data includes information on the movements of marine mammals, as well as information on the environment. The data is available to researchers and the public through the OTN website.

Principal Investigator: Dr. [Name]

Project Website: <http://oceantrack.org/halifax-line>

Web Data Reporting Pattern: <http://oceantrack.org/halifax-line>

Get Public Data: <http://oceantrack.org/halifax-line>



Surgically Implanting Pinger Tags

- VEMCO acoustic tags
 - Optional Sensors
 - Temperature
 - Depth
 - Acceleration



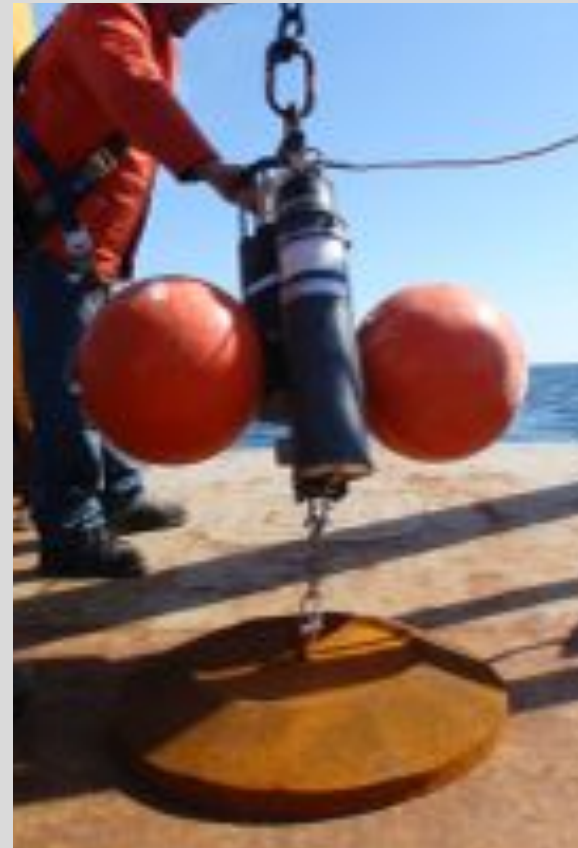
www.vemco.com/products/transmitters



Operating Passive Acoustic Moorings

VEMCO receivers

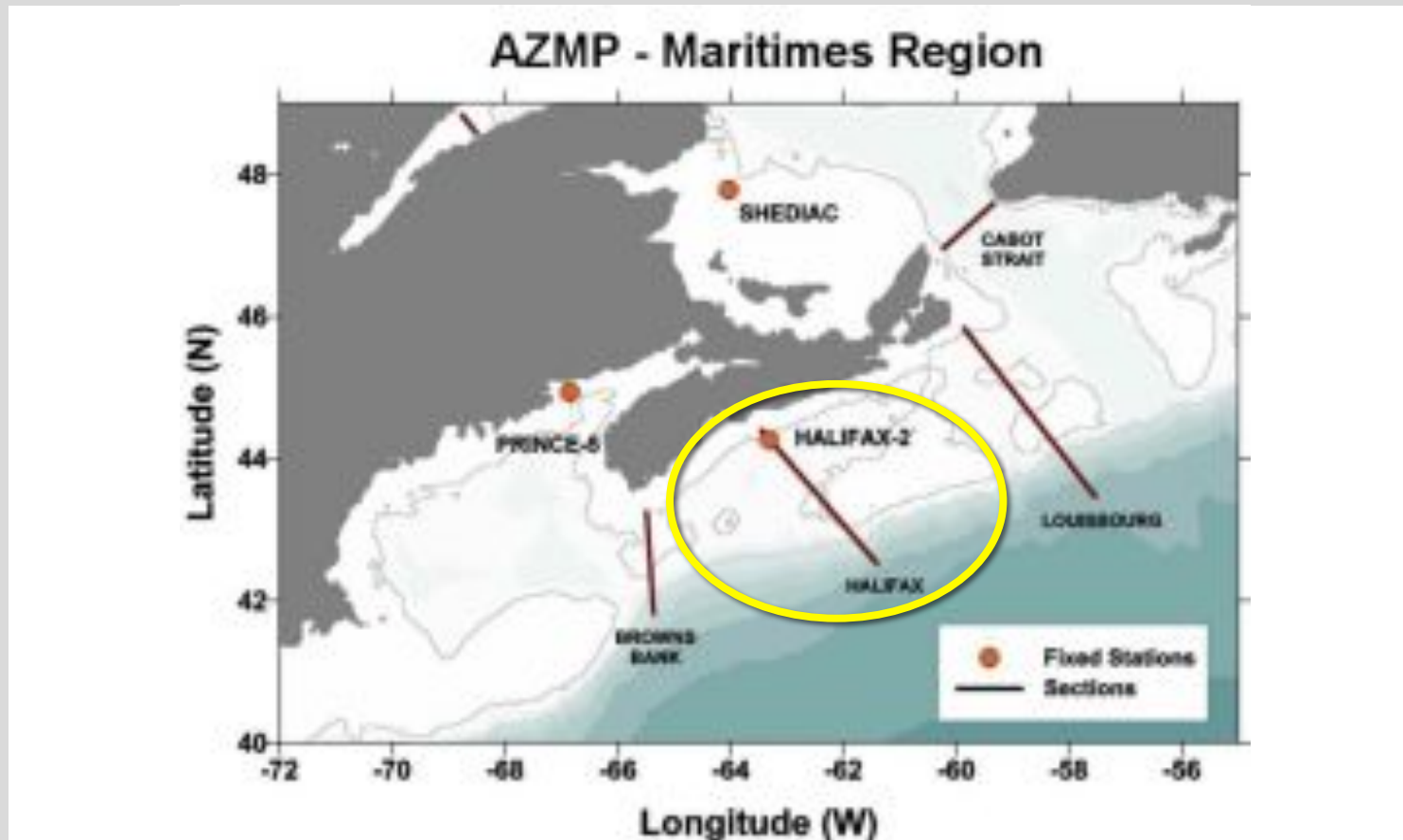
- ~ 800 metre spacing
- ~ 50-200 metre depth
- models / battery life
 - VR2W / 1 yr
 - VR3 / 3 yr
 - VR4 / 5 yr



www.vemco.com/products/receivers



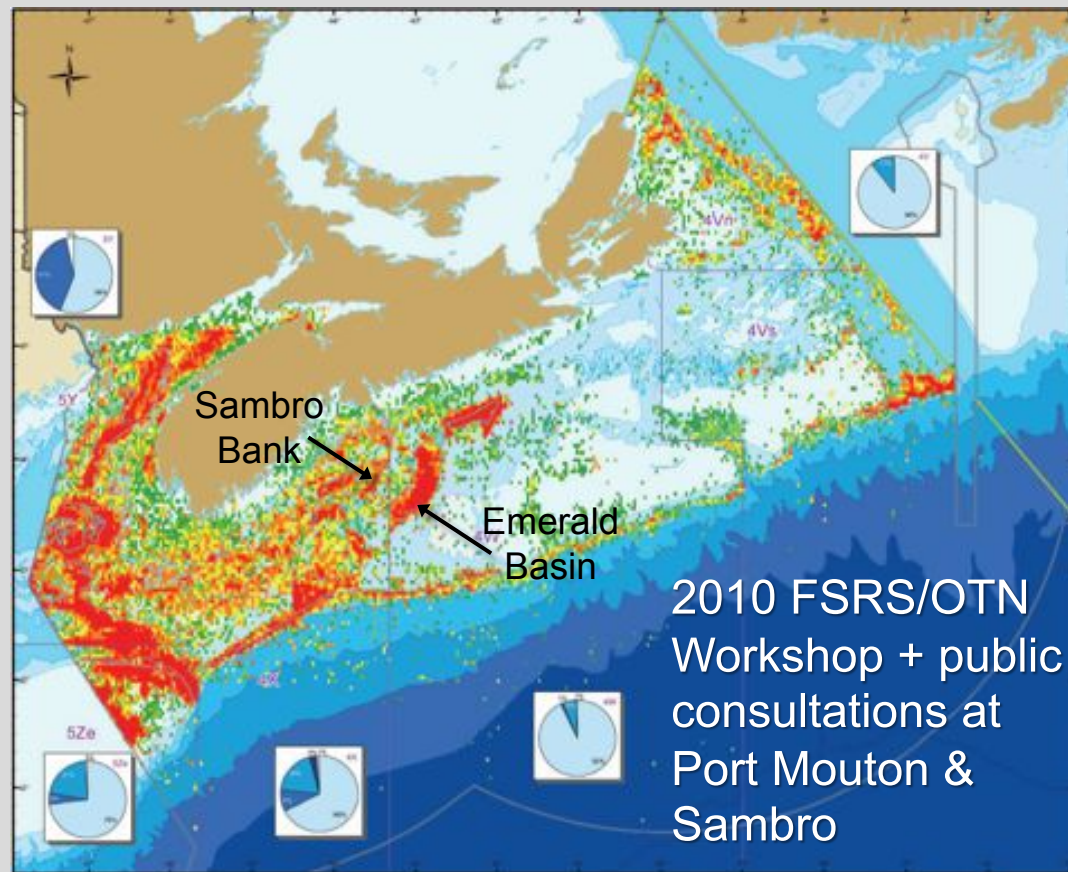
Uniting animal trackers with oceanographers



<http://www.bio.gc.ca/science/monitoring-monitorage>



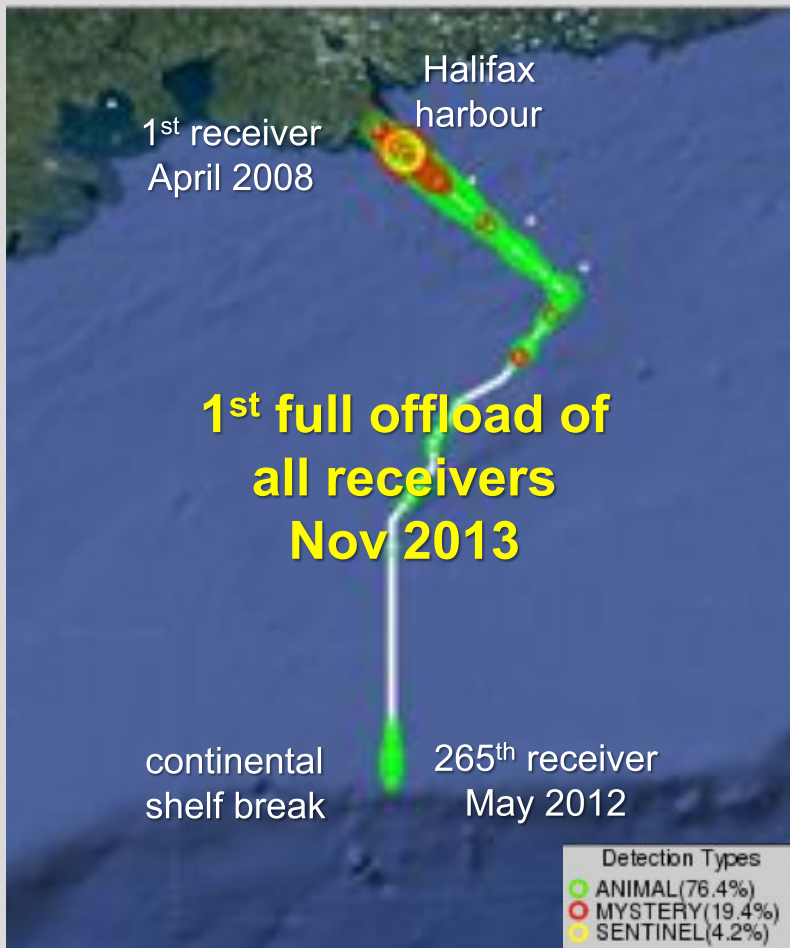
Avoiding intense fishing in Emerald Basin and on Sambro Bank



www.mar.dfo-mpo.gc.ca Atlas of Human Activities



A massive undertaking that took 4 years to complete!



59+ missions
265 moorings
205 km long

OTN Field Ops Team

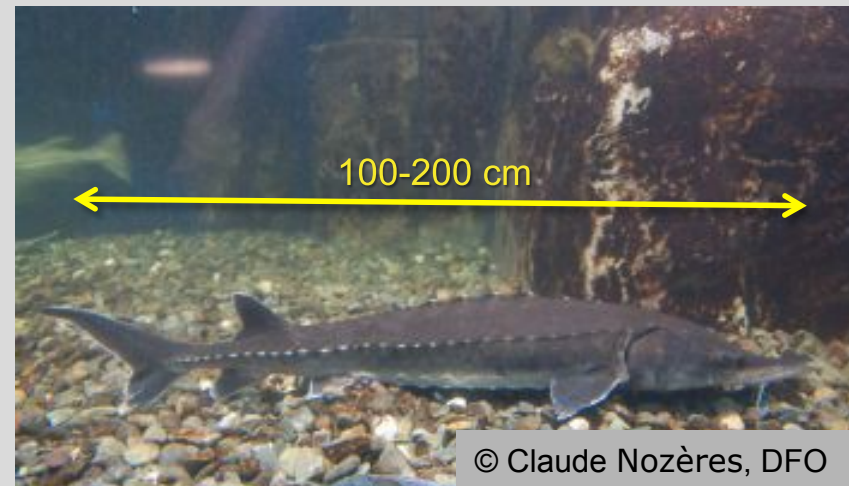


Ian Beveridge, Duncan Bates



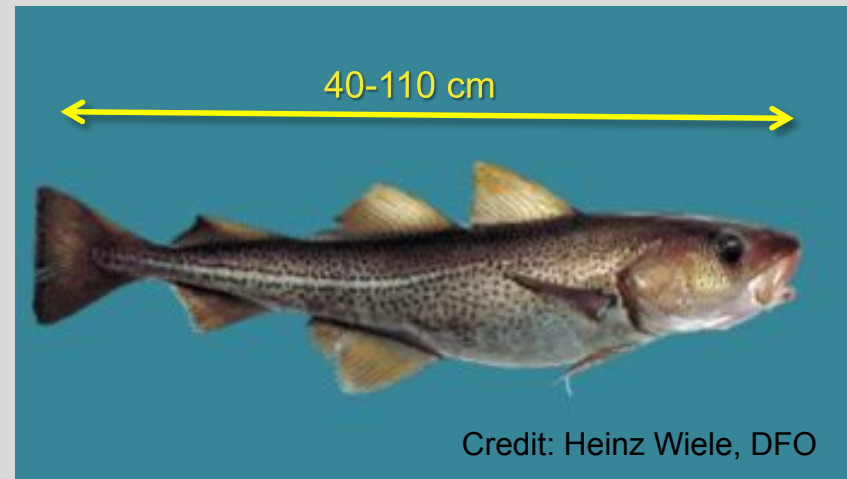
Acipenser oxyrinchus / Atlantic sturgeon

- Acadia University ([MPD](#))
- Delaware State University ([DAS](#))



Gadus morhua / Atlantic cod

- DAL-DFO-BIO:
Dalhousie University
and DFO, Bedford
Institute of
Oceanography ([SGS](#))



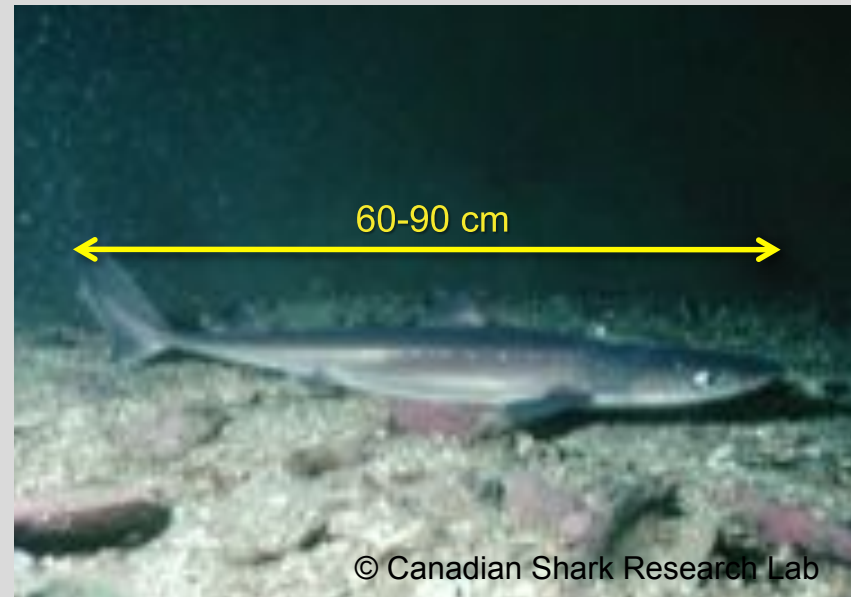
Salmo salar / Atlantic salmon

- DFO-BIO: Bedford Institute of Oceanography ([IBFS](#), [LHV](#), [SMR](#), [WRS](#))
- NOAA-NMFS-NEFSC: National Marine Fisheries Service, Northeast Fisheries Science Center U Maine ([PBN](#))
- USGS: U.S. Geological Survey ([PBU](#))



Squalus acanthias / spiny dogfish

- DFO-BIO: Bedford Institute of Oceanography ([WDG](#))



www.marinebiodiversity.ca/shark



Thunnus thynnus / Atlantic tuna

- Stanford U: Stanford University / Tag A Giant Program ([TAG](#))



www.tagagiant.org/



Satlantic Benthic Pods

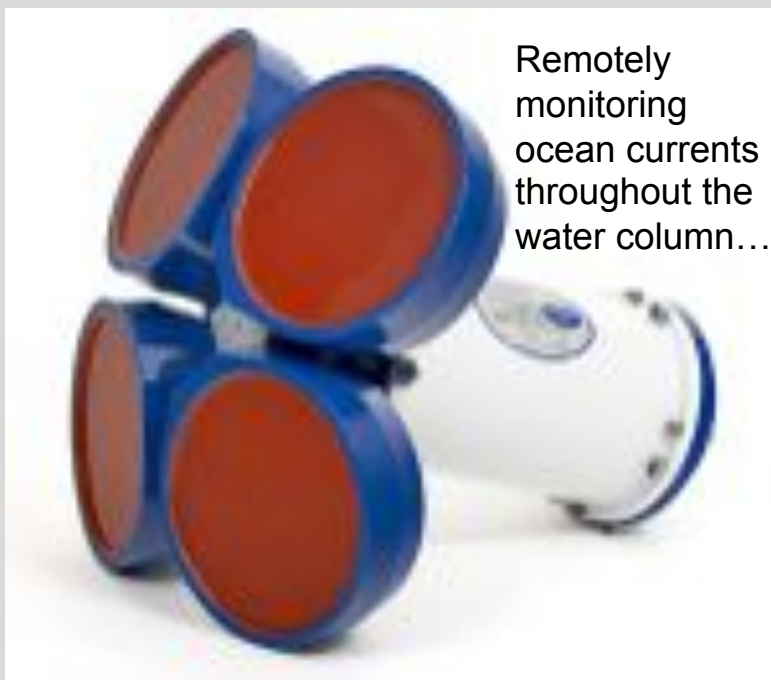
- Year long time series of
 - Bottom pressure
 - Temperature
 - Salinity

satlantic.com/benthicpod



Stand alone moorings

Teledyne Acoustic Doppler Current Profilers



Remotely monitoring ocean currents throughout the water column...

www.rdinstruments.com/quartermaster.aspx

Seabird Conductivity Temperature and Pressure Recorders



www.seabird.com/products



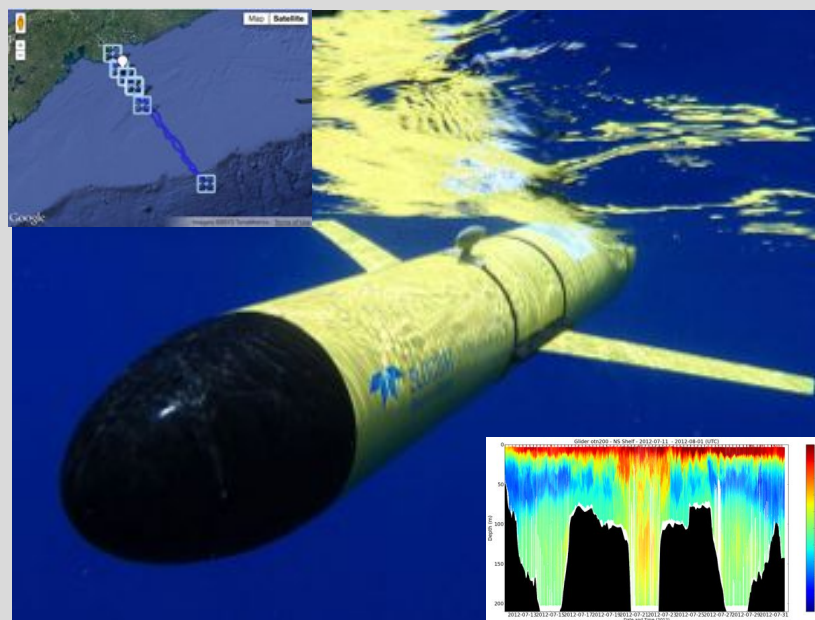
Remotely operated / autonomous vehicles

Liquid Robotics Wave Glider



liquidr.com/technology/wave-glider.html

WEBBResearch Slocum Glider



www.webbresearch.com/electricglider.aspx



Credits

Halifax Line

- Scientific Contacts ...
 - Hebert, Dave - david.hebert@dfo-mpo.gc.ca
 - Smith, Peter C. - peter.c.smith@dfo-mpo.gc.ca
- Institution ...
 - DFO-BIO: Fisheries and Oceans Canada, Bedford Institute of Oceanography

just one part of a global network...



Intelligent open access to publicly funded research data

- all data to be available in timely manner as condition of funding
- except:
 - endangered species
 - thesis data of Highly Qualified Personnel in training



Built in long term sustainability and global accessibility

Fisheries and Oceans Canada
www.dfo-mpo.gc.ca

Home > Science > Data and Products > Integrated Science Data Management.

Integrated Science Data Management (ISDM)

Providing Access to Ocean Data

ISDM's mandate is to manage and archive ocean data collected by DFO, or acquired through national and international programmes conducted in ocean areas adjacent to Canada, and to disseminate data, data products, and services to the marine community in accordance with the policies of the Department.

Data Request Form

Requests for data, data products and additional information may be made online by completing the Data Request Form.

Important Messages

[Commercial Reproduction](#)

[Past notices](#)

Programme Descriptions

- [Argo](#)
- [Atlantic Zone Monitoring Programme](#)
- [BioChem](#)
- [Climate Variability \(CLIVAR\)](#)
- [National Contaminants Information](#)
- [Tides and Water Levels](#)
- [Global Temperature-Salinity Profile](#)
- [Joint Commission on Oceanography Meteorology \(J-COMM\)](#)
- [Responsible National Oceanographic \(RNODC\)](#)
- [Ship of Opportunity Programme \(SOOP\) Implementation Panel](#)

ICES
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Offshore Oil & Gas
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Thermosalinographs
Tides and Water Levels
TWL Applications
Waves
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OBIS OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM

Welcome to OBIS!

OBIS allows users to search marine species datasets from all of the world's oceans.

SEARCH OBIS PAGES

SEARCH

OBIS.ORG VERSION 2

Looking for the version of the OBIS website from before September 2010? OBIS version 2 is still running here.

RECENT NEWS

- 2010-09-21 Launch of the new OBIS web site imminent
- 2010-09-02 Prototype OBIS web site becomes available
- 2010-08-02 iOBIS node manager on study visit
- 2010-08-02 New Data on OBIS
- 2010-07-18 New members of staff

With our evolving OBIS database repository, users can identify biodiversity hotspots and track their temporal patterns, analyze distribution of species over time and space, and use the toolbar above.

Information, select

INTERNATIONAL OCEANOGRAPHIC DATA & INFORMATION EXCHANGE

www.iode.org

ICES OF MARINE LIFE

RUTGERS UNIVERSITY

OBIS strives to document the world's diversity, distribution and abundance of life. Created by the Census of Marine Life, OBIS is now part of the Intergovernmental Oceanographic Commission of UNESCO, under its International Oceanographic Data and Information Exchange programme.



Supported by: OTN Data Management Team ...



Bob Branton, Marta Mihoff, Brian Jones, Lenore Bajona, Susan Dufault

THANK YOU

Some browsing suggestions:

- oceantrackingnetwork.org
- members.oceantrack.org/data
- global.oceantrack.org/docs/2012-otn-annual-report






OCEAN
TRACKING NETWORK

The End

